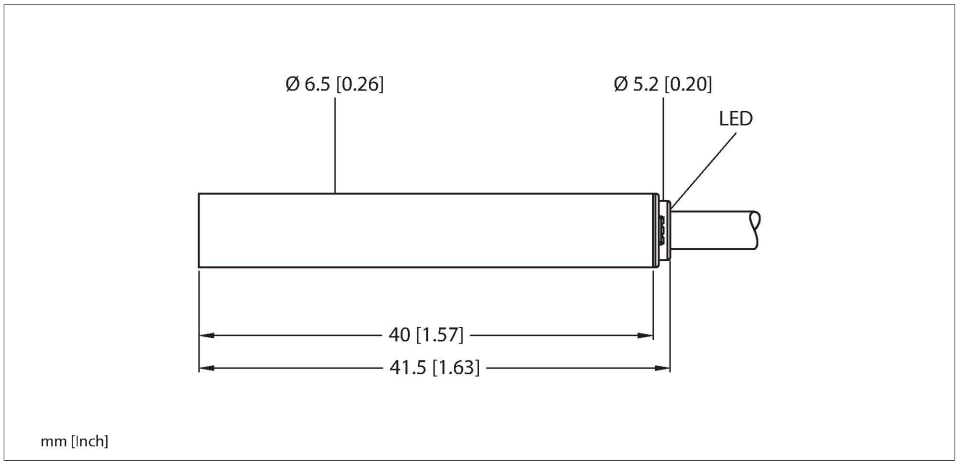
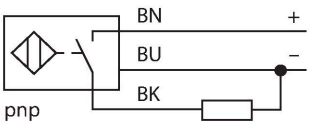
BI1.5-EH6.5-AP6X/S100
Inductive Sensor – With Increased Temperature Range



Features

- Smooth barrel, Ø 6.5 mm
- Stainless steel, 1.4305 (AISI 303)
- Temperatures up to +100 °C
- DC 3-wire, 10…30 VDC
- NO contact, PNP output
- Cable connection

Wiring diagram

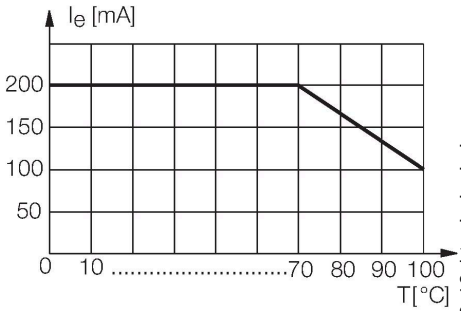


Technical data

Type	BI1.5-EH6.5-AP6X/S100
ID	4612001
Special version	S100 corresponds to: Maximum ambient temperature = 100 °C
General data	
Rated switching distance	1.5 mm
Mounting conditions	Flush
Secured operating distance	≤ (0.81 × Sn) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	≤ 2 % of full scale
Temperature drift	≤ ±10 %
	≤ ± 20 %, ≥ +70 °C
Hysteresis	20 %
Electrical data	
Operating voltage	10…30 VDC
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 150 mA
Rated operational current	See derating curve
No-load current	15 mA
Residual current	≤ 0.1 mA
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes / Cyclic
Voltage drop at I_e	≤ 1.8 V
Wire breakage/Reverse polarity protection	yes / Complete

Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit.
Special versions are available for ambient temperatures between -60°C and +250°C.

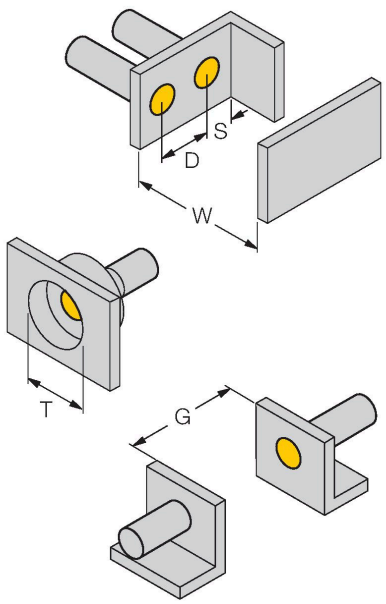


Technical data

Output function	3-wire, NO contact, PNP
Switching frequency	3 kHz
Mechanical data	
Design	Smooth barrel, 6.5 mm
Dimensions	41.5 mm
Housing material	Stainless steel, 1.4305 (AISI 303)
Active area material	Plastic, PA6.6
End cap	Plastic, PP
Electrical connection	Cable
Cable quality	Ø 3.3 mm, Gray, LifY-11Y, PUR, 2 m
Core cross-section	3 x 0.14 mm^2
Environmental conditions	
Ambient temperature	-25…+100 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	2283 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	LED, Yellow

Mounting instructions

Mounting instructions/Description



Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Diameter active area B	Ø 6.5 mm